San Diego DX Club Bulletin

September 2018

HAARP

September Program

Arnie Shatz, N6HC

Baker Island, KH1, DXpedition

Meeting notice:

Wednesday, September 26, 2018

Join us at The Sizzler, 3755 Murphy Canyon Road,

San Diego, CA 92123 (858) 278-6988

Social hour, 5:00 p.m. Dinner, 5:30 p.m.

Meeting, 6:30 p.m

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President:
Ron Richards, WB1EAZ
(978) 764-4394
ronaldbrichards@gmail.com
Vice President/Pgm Chair:
Ron Rosson, N6XT
(760) 445-6495
ron@n6xt.org
Secretary/Treasurer:
Randy Standke, KQ6RS
(619) 890-2697
r55stan@gmail.com
Past President:
Mike Binder, NA6MB
(858) 673-9201
NA6MB@arrl.net
Board of Directors:
Lou Poanessa, KW6Q
(619) 990-5869
poanessal@gmail.com
Eric Gruff, NC6K
(858) 735-0320
nc6k@arrl.net
Bud Hennesy, AE6BH
AE6BH@cox.net
Ladder:
John Barcroft, K6AM
k6am@arrl.net
Webmaster:
Glen Christensen, AI6RR
Historian:
Glenn Rattmann, K6NA
(760) 749-3936
k6na@cts.com
Bulletin Editor:
Bob Farkaly, K9RHY
(619) 602-2653
bob@farkaly.com

From the Prez . . .

Ron, **WB1EAZ**

Not a lot to report on this month. Elaine and I spent 10 days in New England attending her high school reunion and visiting old friends. It was great to visit with old friends and make a few new ones. The seafood was wonderful and Elaine really enjoyed her Maine Lobster. Unfortunately I missed the August SDDXC meeting, so I am eagerly looking to the September meeting with Arnie, N6HC, presenting. I had a chance to get an update from him on his trip to KH1 at the DX Bash. Arnie always delivers a great program.

Elaine also had some eye surgery that has kept me busy and off the bands. I am looking forward to the fall DX season as it appears that there should be plenty of activity for all. I will be interested in how the FT8 mode works out with all the DXpeditions, particularly VP6D and VK9XG, who have overlapping frequencies for their planned activity. Note that the activity overlaps by 10 days, and using the DXpedition mode, requires 4kHz. I also want to apologize for the confusion surrounding the emailing of last month's Bulletin. I was just leaving for our trip when I saw the bulletin from K9RHY in my inbox and thought that I had sent it to all.

So note when the DXpeditions on are on your calendar and plan accordingly. Remember the Holiday Party as Ron, N6XT, should have some information shortly.

Have fun and enjoy!

Ron, **WB1EAZ**

Secretary/Treasurer Reports

Randy, **KQ6RS**

Meeting Minutes, August 22, 2018

At 6:25 pm Ron Rosson, N6XT called the meeting to order. 28 members and one guest were in attendance. Our guest was Jim Franklin, KF6QH.

Old business – The July minutes and Treasurer Report were approved.

New business – The membership voted to approve donating $1,000.00 to the Northern California DX Foundation (mailed check on 8/23/2018). Copy of letter of appreciation follows.

At 6:30 pm we started the roundtable discussion.

At 6:51 pm we took a break.

At 7:05 pm Mike Binder, NA6MB, and Gayle Olson, K6GO, gave a presentation on the Friedrichshafen Ham radio convention and their travels in Germany and the Czech Republic. They also gave a presentation on contesting and operating from Cayman Island.

At 8:00 pm (approx.) the meeting was adjourned.

Treasurer's Report

Income for August:	None
Expenses:	$39.83 for speaker's dinner.
	$1,000.00 for 2018 NCDXF contribution.
Statement Balance on 8/23/2018	$7,485.45

Randy, **KQ6RS**

SDDXC TOP 10

Top Ten is on summer vacation.

John, **K6AM**

August 31, 2018

NORTHERN CALIFORNIA DX FOUNDATION

President
John Miller, K6MM
webaron@gmail.com

Vice President
Ned Stearns AA7A
aa7a@cox.net

Treasurer
Don Greenbaum, N1DG
don@aurumtel.com

Secretary
Glenn Johnson, W0GJ
vjohnson@paulbunyan.net

Randy Standke
Secretary/Treasurer, San Diego DX Club
1209 N Grape St
Escondido, CA 92026

Dear Randy:

Please accept our sincere thanks to your organization for the generous contribution of $1,000.00 to the Northern California DX Foundation.

This year marks the NCDXF's 46th anniversary and we are very proud of its longevity and the support we have given hundreds of DX activities over the years.

While we are proud of our accomplishments, we know the grants we give to major DX operations could only happen with the support you and many others provide to us yearly.

The Internal Revenue Service has recognized NCDXF as being an organization described in Section 501 (C) 3 of the Internal Revenue Code with a Federal Tax ID number 94-2853576. As such, all donations are tax deductible to the extent permitted by law for United States taxpayers. In compliance with the tax code, we confirm that you have received no goods or services from NCDXF in connection with this contribution.

Sincerely,

Donald Greenbaum
Treasurer, NCDXF

P. O. Box 2012, CUPERTINO, CA 95015-2012
Phone: 530-546-8377 FAX: 530-546-5893 www.ncdxf.org

VP Report

Our September speaker will be Arnie Shatz, N6HC, describing his experiences as a team member of the recent Baker Island, KH1, DXpedition. Some pictures from the DXpedition below. More at the meeting.

Ron, **N6XT**

SDDXC CONTEST RESULTS

By John, K6AM

CLASS	CALL	SCORE	CW QSO'S	SSB QSO'S	TOT QSO'S	MLTS	FINISH
SO HP	W6YI (N6MJ op)	401,302	1,195	1,667	2,862	58	**1st place CA SOHP** **1st place CA Most SSB QSO's** Wine winner
M/S	NO6T (N5ZO, N6AN op)	340,576	1,272	1,028	2,300	58	**1st place CA M/S** **1st place SD County**
M/S EXPD Imperial	K6QK Ops = N7CW, K6ZH, N6EEG, N6ERD	251,085	935	800	1735	57	**1st place CA M/S Expedition**
SO LP	KI6RRN	217,569	963	464	1,427	57	**1st place CA** **1st place SD County SOLP** Wine winner
M/S	NX6T (OPS, N6KI, N6CY, K4RB, WB6NBU, KK6NON, W6ZAR, N6NC, W2PWS, NA6MB, K6GO	201,712	720	721	1,441	56	2nd place SD County
SOA HP	NC6K	200,184	896	412	1,308	57	**1st place SD County** **New record SOA LP San Diego** Wine winner
SO LP	WN6K	142,352	612	353	965	56	2nd place SD County SOLP 3rd place CA
SO LP	WB6NBU	25,872	190	9	199	44	
SO LP	N6NO	15,504	136	0	136	38	
SO LP	KK6NON	12,136	0	148	148	41	
SOA LP	N6XT	9,207	25	111	136	31	

2017 produced another great turnout for the CQP. Again this year SDDXC club stations won more first place plaques than any other county. And to top it off, NC6K set a new record! Great job guys!

The amazing N6MJ piloted superstation W6YI to yet another overall win using his now legendary simultaneous two-radio technique. The K6QK memorial team continued their streak this year and took another win from the castle just across the border in Imperial County And our WRTC champ-in-training Axel, KI6RRN finished first in low power yet again, along with Marko, N5ZO, and partner Dave, N6AN winning again for M/S.

The 2018 running of the CQP is slated for 1600 UTC Oct 6 to 2200 UTC Oct 7. Go to cqp.org for details on the rules, county abbreviations and all the other details. Last year's top scorers from our club are already putting the finishing touches on their plans for this year's run.

John, **K6AM**

From the Editor

Bob, **K9RHY**

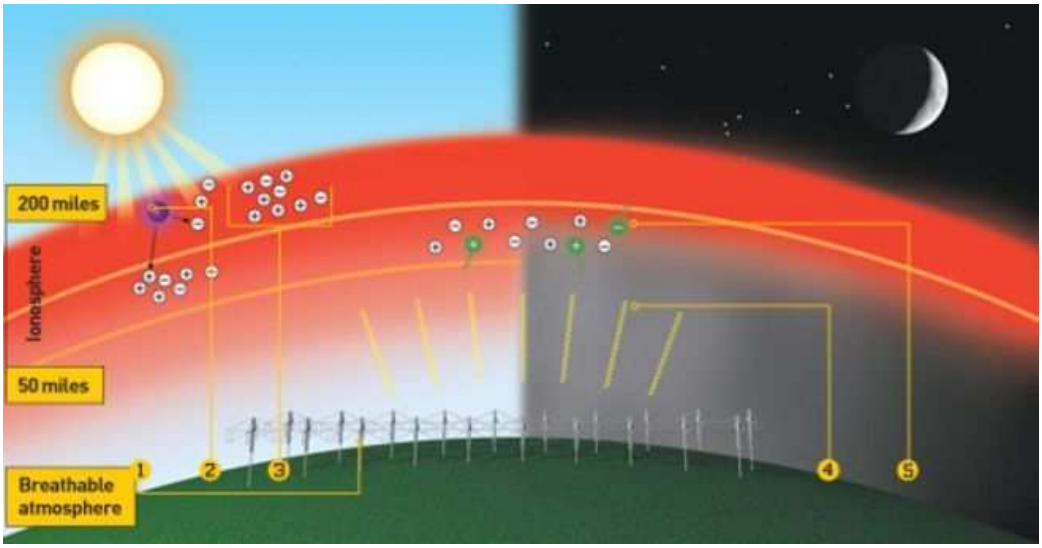
HAARP

Think about the following picture: What if every morning a group of plasma-physics grad students wakes up at a research facility 200 miles north of Anchorage, AK and prepares for another day of diabolical experiments. The weather is Alaska-cold and it's as dark as a tax collector's heart. This group of researchers must shoot radio waves into the upper reaches of our atmosphere to create missile shields, eviscerate enemy satellites, set off the occasional earthquake, or control the minds of millions of people. They would be working on HAARP.

What on earth is HAARP and why would anyone need a tinfoil hat to protect against it?

The High Frequency Active Auroral Research Program (HAARP) was initiated as an ionospheric research program jointly funded by the U.S. Air Force, the U.S. Navy, the University of Alaska Fairbanks, and the Defense Advanced Research Projects Agency. It was designed and built by BAE Advanced Technologies.

HAARP's real purpose is to study the ionosphere (the section of the atmosphere beginning about 50 miles up in which ultraviolet radiation temporarily strips atoms of their electrons), the magnetosphere (the region in space above the ionosphere where the Earth's magnetic field affects the behavior of charged particles) and the Van Allen radiation belts (bands of highly charged particles contained in the magnetosphere beginning some 400 miles up). DXers are interested in the ionosphere because of its ability to reflect radio signals making X contacts possible.



But that explanation takes all the fun out of it. Wouldn't it be more interesting and exciting if HAARP could (rightfully?) take it's place among the world's Top Ten Conspiracy Theories like those surrounding Roswell and Area 51, the moon landing being faked, BitCoin, the Illuminati and so many others.

But HAARP isn't all about mind control and human-induced earthquakes.

The HAARP facility houses the HF transmitter with a phased-array antenna to focus and direct the radiated power. The transmitter is roughly as powerful as the largest military radars, generating up to 3.6 MW of RF power in the 2.8 to 10 MHz band (HAARP QRM in the ham bands!). HAARP is restricted to operations only at specified frequencies in this band. (Some "Big Gun" Club members may claim that 3.6 MW is QRP, but any rig that can warm and light up the ionosphere is OK by me!

The power level, however, isn't what makes HAARP exceptional. Rather, the credit for that goes to HAARP's phased array antenna. Consisting of 180 individual dipole antennas placed in a field roughly 33 acres in size, this array acts as a highly directional antenna, with a beamwidth of about five degrees. By the time the RF energy reaches the ionosphere (say, at an altitude of 200 km /124 mi just for this example), the size of the radiated spot is about 18 km (11 mi) in diameter, and the power density is roughly 14 mW/sq m. As the ionosphere is opaque in HAARP's frequency band, it absorbs nearly all of the incident power.

Looking at the HAARP picture to the left, that setup looks like it could really burn through the QRM! And for me, I'm keeping my tinfoil hat on.

Bob, **K9RHY**

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